

## A TEXAN SPECIES OF MEGAPTERIUM<sup>1</sup>

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While looking over some material in the herbarium of the Missouri Botanical Garden, a sheet was found containing three specimens which were so distinctive that it seemed desirable to describe them. The interest in them was enhanced by the fact that one of the specimens differs strikingly from the other two in such a way as to suggest that it may be a mutation. The plants in question were collected at Amarillo Creek, in Northern Texas, by J. Reverchon, who had recognized them as representing a new species of *Megapterium*.

I am indebted to Dr. Greenman for suggesting a very appropriate name for this species. The diagnosis is as follows:

***Megapterium argyrophyllum***, sp. nov. Plate 23. figs. 1 and 2.

Herba cæspitosa; foliis lanceolatis, petiolatis obscure glanduloso-denticulatis, utrinque dense canescento-pubescentibus; caulibus et alabastris (hypanthio et ovario incluso) canescente pubescentibus; ovarium quadrialatum, pedicellatum; hypanthium 9–10 cm. longum, paulatim ad basin conii dilatatum; petala 3–4 cm. longa.

Var. ***retusifolium***, var. nov.

Plate 23. fig. 3.

A forma typica differt foliis subrotundis bis oblongo-obovatis, retusis, mucronatis; floræ grandioræ (petala 45 mm. longa).

Specimens examined:

Texas: on rocky bluffs at Amarillo Creek, in northern Texas, 29 May, 1902, *J. Reverchon*, 2749 (Mo. Bot. Gard. Herb.), TYPE; stony bluffs along Red River, Randall Co., northern Texas, 12 August, 1900, *H. Eggert* (Mo. Bot. Gard. Herb., 4 sheets).

Two of the specimens, one slightly older than the other (see pl. 23 fig. 1, 2), represent the type of the species. The plants are cæspitose or with very short internodes, leaves coriaceous, lanceolate, broad-pointed, tapering below to a petiole, about

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8 cm. long by 2 cm. in greatest width, margin distantly and obscurely glandular-denticulate, very densely and uniformly covered on both surfaces with an appressed canescent pubescence of long, pointed, tuberculate hairs. Stems and buds less densely covered with the same type of pubescence, ovary four-winged, 10–15 mm. in length, densely canescently pubescent, pedicellate; hypanthium 9–10 cm. in length, 2–2.5 mm. thick, gradually widening to base of cone; bud cone 30–35 mm. in length, diameter at base 8 mm., sepal tips appressed, 3–4 mm. in length, petals 3–5 cm. long, stigma surrounded by or slightly exceeding the stamens; capsules immature.

The remarkable canescent pubescence covering the whole plant, as well as the cæspitose habit, distinguish this species from *Megapterium missouriensis* (Sims) Spach, and *M. macrocarpum*.<sup>1</sup> The flowers are also smaller, there are no purple spots on the sepals, and the hypanthium is shorter than in these species, which differ in foliage as well. The present species is apparently perennial. Its nearest relative is *M. Fremontii* (Watson) Britton, from which it differs in the more cæspitose habit, larger flowers, and much broader leaves.

The variety *retusifolium* is founded on the third specimen on the sheet (see pl. 23 fig. 3). It differs sharply from the species in the shape of the leaves, which are very broad and blunt at the point, subrotund to oblong-obovate, retuse, and distinctly mucronate. The margin of the leaves is also nearly or quite entire. The flowers are larger (petals 45 mm., bud cone 9 mm. in diameter at base). Microscopic examination of the hairs disclosed considerable variation in size, but apparently no constant difference from those of the species.

The Eggert specimens, while obviously belonging to the same species, show much more variability in foliage. The leaves vary on different specimens from narrowly lanceolate (9 mm. in width) to broad oblong-lanceolate (30–36 mm. wide) and acuminate. The latter resemble var. *retusifolium* except the leaf tips, which are only slightly retuse in one specimen. One of the broad-leaved specimens also has a smaller flower (petals 20 mm.). Cultures from seeds from this locality would doubt-

<sup>1</sup> *Megapterium macrocarpum* (Pursh), comb. nov.

*Oenothera macrocarpa* Pursh, Fl. Am., Sept. 2: 734. 1814.

less disclose a considerable number of forms. The ripe fruits from these specimens are broadly winged, nearly orbicular, about 35 mm. long and 25 mm. wide, retuse or acuminate at the apex.

Examination of herbarium specimens of *M. missouriensis* (Sims) Spach makes it evident that the polymorphism in this species as now understood is quite as great as in many species of *Ænothera*. There are included races varying in amount and character of pubescence, in width of leaf from broadly lanceolate to almost linear, in presence or absence of purple spots on the sepals, in size of flower, and other features.

## EXPLANATION OF PLATE

## PLATE 23

Figs. 1 and 2. *Megapterium argyrophyllum*. From the type specimens, J. Reverchon, No. 2749 in part, in the Herbarium of the Missouri Botanical Garden.

Fig. 3. *M. argyrophyllum* var. *retusifolium*. From the type specimen, J. Reverchon No. 2749 in part, in the Herbarium of the Missouri Botanical Garden.